

Date: Thursday, 10/25/2007 10:05:07 AM
 User: Kim Johnston

Process Sheet

47

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : 0H-58 SKIDTUBE ASSEMBLY
 Job Number : 35352A
 Estimate Number : 10475
 P.O. Number : N/A Part Number : D058672041
 This Issue : 10/25/2007 S.O. No. : N/A Drawing Number : D2922 REV A1
 Prsht Rev. : NC Project Number : N/A
 First Issue : N/A Type : LANDING GEAR Drawing Revision : A1
 Previous Run : 35351A Material : N/A
 Due Date : 11/20/2007 Qty: 1 Um: Each
 Written By :
 Checked & Approved By : 10/25
 Comment : Est Rev:C 02.06.28 Re-format; ECN 258 KJ
 Est Rev:D 06.02.06 Added Dt8025 EC

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy bluefile & type labels per PPP D058-672-041 CHG 001

K8 07.10.29

2.0

D2620

Bent 206 Skidtube



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2620 Bent Tube 3" OD B34682 DP 7-10-29

3.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Deburr Fwd edge of tube DP 7-10-29

2-Weld D2794 cap as per QSI 004 and Dwg D2922. Use aluminum rod.

A/R Aluminum Rod M105138 BE 04/10/29

3-Cut aft end of D2620 bent tube as per dwg D2922

4-Drill pilot holes using drill jig DT8480 and DT8025 open to 0.312" dia.

5-Drill holes for wearplates using DT 8487 Open to 0.297" dia.

6-Open holes for aft cap and tow ring as per Dwg D2922 .

DP
7-10-30

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 10/25/2007 10:05:08 AM
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 0H-58 SKIDTUBE ASSEMBLY

Job Number: 35352A

Part Number: D058672041

Job Number:



Seq. #:

Machine Or Operation:

Description :

8-Remove inner indexing ridge on aft end of skidtubeas per Dwg D2922

9-Deburr and Blow out all chips form inside the tube

> DP 7-10-30

4.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

6 07-11-06

5.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

DD 07-11-06 (1)

6.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

BE 07-11-06

7.0

D2923

Web



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2923

Web

B3565

BE 07-11-06

8.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open holes to finished size as per Dwg D2922(without cutting fluid)

BE 07-11-06

2-Countersink crossbolt spacer holes as per Dwg D2922(without cutting fluid)

BE 07-11-06

3-Deburr and Blow out all chips from inside the tube

BE 07-11-06

4-Bond D2923 web in place as per QSI 015. Ensure holes lineup

A/R

Sikaflex-291

Sikaflex expire date:

105488
8-7-1

BE 07-11-06

Dart Aerospace Ltd

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Job Number: 35352A

Part Number: D058672041

Job Number:



Seq. #:

Machine Or Operation:

Description :

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

ES 07/10/07

10.0

D2794

Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Qty

Part Number

Description

Batch

1 D2794

Fwd Cap

B14588 BE 07/10/29

11.0

D2649

Crossbolt Spacer



Comment: Qty.: 22.0000 Each(s)/Unit Total : 22.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

22 D2649

Crossbolt spacer

B24508 BE 07/11/07

12.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Weld D2649 cross bolt spacers as per QSI 004 and Dwg D2922.(Remember to back drill each hole to 0.250" before welding the other side)

A/R Aluminum Rod

M105138 BE 07/11/07

3-Grind welds flush as per Dwg D2922

W 7-11-9

4-Counterbore 5/16" x 0.750" deep as per Dwg D2922

13.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

ES 07/10/09

14.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

W 07-11-09 U

15.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

M105914
Pressure wash m-l
m-l

(1x)
07/11/12
07/11/12 (1x)

Dart Aerospace Ltd

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Job Number: 35352A

Part Number: D058672041

Job Number:



Seq. #:

Machine Or Operation:

Description :

16.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

07-11-13

(21)

17.0

D26483

Wearpad



Comment: Qty.: 5.0000 Each(s)/Unit Total : 5.0000 Each(s)

Pick:

Qty Part Number Description Batch

5 D2648-3 Wearpad

B33059

MS

18.0

D265615

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2656-15 Wearshoe

B332579

MS

19.0

D265621

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2656-21 Wearshoe

B27075

MS

20.0

D2924

Wearshoe



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2924 Wearshoe

B35368

*

MS

21.0

MS27039108

Screw



Comment: Qty.: 50.0000 Each(s)/Unit Total : 50.0000 Each(s)

Pick:

Qty Part Number Description Batch

50 MS27039-1-08 Screw

M105076

MS

07-11-13

(21)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Job Number: 35352A

Part Number: D058672041

Job Number:



Seq. #:

Machine Or Operation:

Description :

22.0

AN960JD10L

Washer



Comment: Qty.: 50.0000 Each(s)/Unit Total : 50.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
50	AN960JD10L	Washer	M1104374

82

23.0

ALS41032130

Insert



Comment: Qty.: 50.0000 Each(s)/Unit Total : 50.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
50	ALS4-1032-130	Insert	M1105729

or (see QSI 017)

81

24.0

D26511

Plug



Comment: Qty.: 20.0000 Each(s)/Unit Total : 20.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
20	D2651-1	Plugs	B33349

82

25.0

D26513

O-Ring



Comment: Qty.: 20.0000 Each(s)/Unit Total : 20.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
20	D2651-3	O-Rings	B34592

83

26.0

D2646

Aft Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D2646	Aft Cap	B31335

28 07-12-13 (X)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 0H-58 SKIDTUBE ASSEMBLY

Job Number: 35352A

Part Number: D058672041

Job Number:



Seq. #:

Machine Or Operation:

Description:

27.0

MS27039108

Screw



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 MS27039-1-08 Screw M105076

92

28.0

AN960JD10L

Washer



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 AN960JD10L Washer M104374

96

29.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Install inserts & wearpads as per dwg D2922. Insert a drop of Sikaflex at insert hole before installing wearplates.

A/R Sikaflex-291

M105585

Sikaflex expire date: 08-07

2-Install O-Rings D2651-3 on plugs D2651-1 with Petroleum Jelly and install plugs as per Dwg D2922

3-Install D2646 Aft Cap and seal with Sikaflex adhesive. Clean excess adhesive

A/R Sikaflex-291

M105585

Sikaflex expire date: 08-07

3- Wing Walk as per Dwg D2922 and QSI 005 4.4

Batch: M106030

30.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

31.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: D Date: 5/11/07
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Job Number: 35352A

Part Number: D058672041

Job Number:



Seq. #:

Machine Or Operation:

Description :

32.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: PPP 35352

10/24/27 (1)

33.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

10/24/27

Job Completion



10/24/27

B35352A

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries



DESIGN RF	DRAWN BY RF	DART AEROSPACE USA, INC. BELLEVUE, WA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D2922	REV. A SHEET 1 OF 2
DATE 99.10.14		TITLE OH-58 SKIDTUBE ASSEMBLY	SCALE NTS
A	99.10.14	NEW ISSUE	
A1	01.08.20	φ0.640 WAS φ0.625	

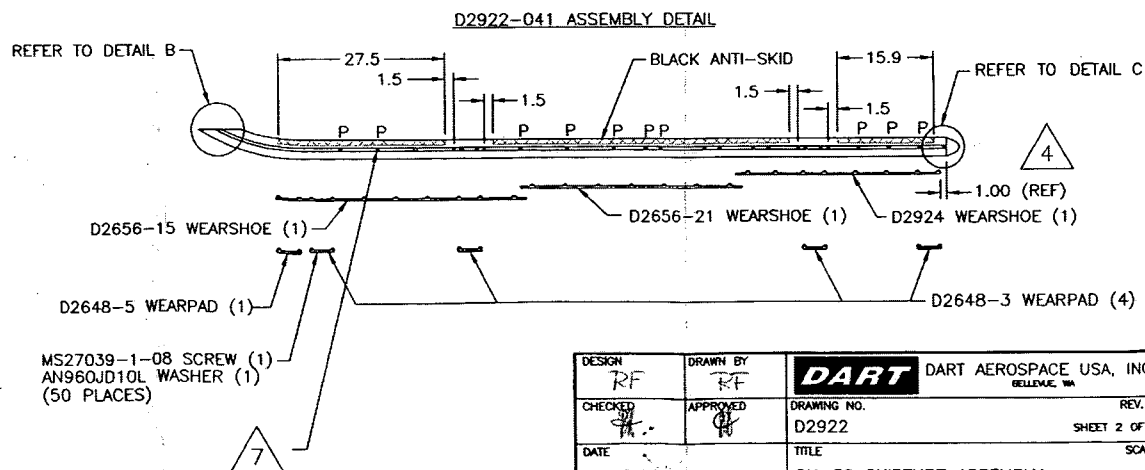
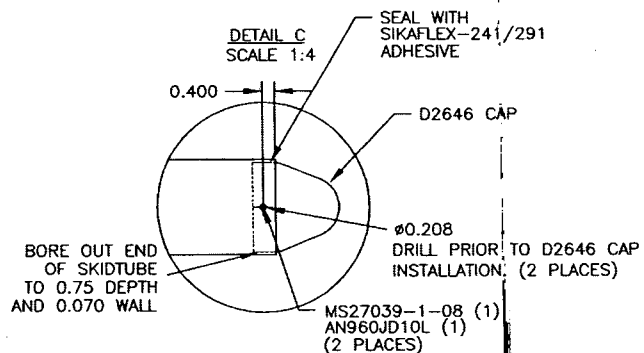
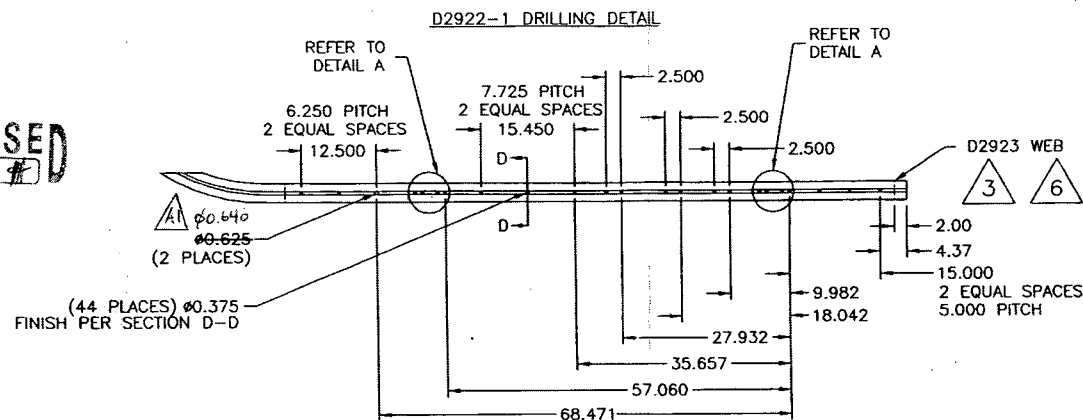
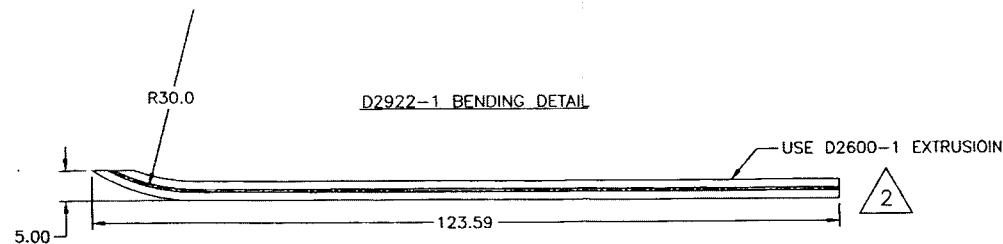
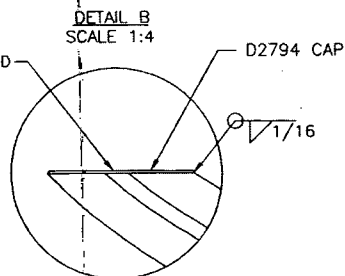
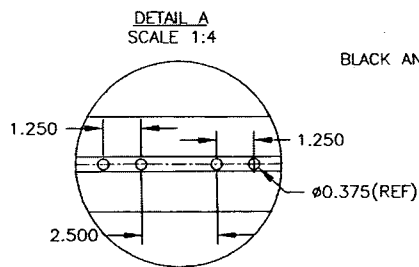
RELEASED
00.05.11 [Signature]

Qty	Part Number	Description
X	D2922-041	SKIDTUBE ASSEMBLY
*	D2600-1	EXTRUSION
1	D2646	AFT CAP.
4	D2648-3	WEARPAD
1	D2648-5	WEARPAD
22	D2649	CROSS BOLT SPACER
20	D2651-1	PLUG
20	D2651-3	O-RING
1	D2656-15	WEARSHOE
1	D2656-21	WEARSHOE
1	D2794	CAP
1	D2923	WEB
1	D2924	WEARSHOE
50	AKS7-1032-130 or AKS4-1032-130 or ALS7-1032-130 or ALS4-1032-130	INSERT
52	AN960JD10L	WASHER
52	MS27039-1-08	SCREW

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) LENGTH OF D2600-1 EXTRUSION REQUIRED BEFORE BENDING = 160 INCHES.*
- 3) INSERT D2923 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- 4) USE DART DRILL TEMPLATE DT8406 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL AKS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL MS27039-1-08 SCREWS AND AN960JD10L WASHERS IN ALL INSERTS. SEAL WITH SIKAFLEX-241/291.
- 5) WELDING TO BE DONE PER DART QSI 004.
- 6) FINISH:
ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2923 WEB
POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 0.50 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 7) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (20 PLACES).

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WITHOUT NOTICE
WORK ORDER
NO. 35352A



- AFTER BENDING AND DRILLING ASSEMBLY PERFORM THE FOLLOWING FOR 0.375 HOLES ONLY:
1. CHAMFER HOLE 0.030 X 45°
 2. INSERT D2649 SPACER (22 PLACES)
 3. WELD INTO PLACE AND GRIND FLUSH
 4. C'BORE D2649 SPACER TO 0.313 X 0.75 DEEP

AKS7-1032-130 (REF)
P 50 PLACES

MS27039-1-08 SCREW (1)
AN960JD10L WASHER (1)
(50 PLACES)

DESIGN RF	DRAWN BY RF	DART DART AEROSPACE USA, INC. BELLEVUE, WA	
CHECKED RF	APPROVED RF	DRAWING NO. D2922	REV. A SHEET 2 OF 2
DATE 99.10.14		TITLE OH-58 SKIDTUBE ASSEMBLY	SCALE 1:20

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WORK ORDER
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NO. 131

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name Bacley, Elliot
Joint Welding Procedure ES
Part number and Job number 02206-412 541 / 634772

TEST WELDS REQUIRED

BASE METAL Aluminium WELDING PROCESS ES
Penetration Complete ☐ Partial ☒ Single Weld ☒ Double Weld ☐
Current AC ☐ DC ☐ Backing YES ☐ NO ☒

	Position		Vertical Down <input type="checkbox"/> Up <input type="checkbox"/>	
Sheet Groove	1G <input type="checkbox"/>	2G <input type="checkbox"/>	3G <input type="checkbox"/>	4G <input type="checkbox"/>
Tube Groove	1G <input type="checkbox"/>	2G <input type="checkbox"/>	5G <input type="checkbox"/>	6G <input type="checkbox"/>
Sheet Fillet	1F <input type="checkbox"/>	2F <input type="checkbox"/>	3F <input type="checkbox"/>	4F <input type="checkbox"/>
Tube Fillet	1F <input type="checkbox"/>	2F <input type="checkbox"/>	4F <input type="checkbox"/>	5F <input type="checkbox"/>

Crossbolt Spacer Welded into Skidtube

TEST RESULTS

Visual Pass ☒ Fail ☐
Penetration Pass ☒ Fail ☐
Crossbolt Spacer Pass ☒ Fail ☐

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

Date of Test Coupon 07-10-99 Qualifier Paul D. Daulton